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CLAIMS

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1. A hair treatment composition comprising a molecule
    having the following formula:

$$R_2 \overset{\displaystyle R_1}{\underset{\displaystyle R_3}{\vrule height 20pt depth 20pt width 0pt \text{—}\!\!\!\!|\!\!\!\!—}} X \text{—} Y$$
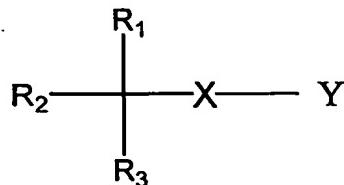
10   in which R_1, R_2 and R_3 are independently selected from a
        methyl, ethyl, propyl group or mixtures thereof; X is a
        substituted or un-substituted alkyl or alkenyl chain
        and Y is an amine or hydroxy group.

15 2. A hair treatment composition according to claim 1 in
        which X is substituted with an amino or hydroxy group.

3. A hair treatment composition according to any preceding
    claim in which the total number of carbon atoms in the
20   molecule is from 3 to 12.

4. A hair treatment composition according to any preceding
    claim in which the molecule comprises at least two
    hydroxy groups, amino groups or mixtures thereof and
25   where n is the total number of carbon atoms in the
        molecule such that each OH or NH_2 is positioned with

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0.5n or less carbon atoms directly between it and all other OH or NH$_2$ groups.

5. A hair treatment composition according to any preceding claim in which R$_1$, R$_2$ and R$_3$ are all methyl groups.

6. A hair treatment composition according to any preceding claim in which the molecule is a diol.

7. A hair treatment composition according to any preceding claim in which the molecule is 3,3-dimethyl-1,2-butandiol.

8. A hair treatment composition according to any preceding claim further comprising a surfactant.

9. A hair treatment composition according to any preceding claim which further comprises a betaine.

10. A hair treatment composition according to any preceding claim which comprises an aqueous base.

11. Use of a composition according to any preceding claim for smoothing hair.

12. Use of a composition according to any one of claims 1 to 10 for aligning hair.

13. Use of a composition according to any one of claims 1 to 10 for preventing damage to the hair.

14. A method of treating hair by applying a composition
according to any one of claims 1 to 10 to the hair.